

Letter to the Editor

Response to Campbell, Spackman, Sullivan letter to Allergy

Our cost-effectiveness analysis has been specifically conducted to inform decisions from a healthcare perspective for uncontrolled severe persistent allergic asthma. This subgroup profile can be applied to a Canadian (or any other) database regardless of country-label specifics.

The AQLQ has been demonstrated to correlate well with the physician's 16-week evaluation of treatment included in the model, and adequate to mimic responder identification in the ETOPA trial. As only those with good or excellent response to omalizumab continue with treatment, the model uses the overall omalizumab group MiniAQLQ scores and clinically significant exacerbation rates for the first 16 weeks. After this, responders have exacerbation rates and utility values based upon the responder MiniAQLQ scores, while non-responders (who stop omalizumab) have those of the placebo group. Using the overall omalizumab group response after 16 weeks would not reflect that only responders continue with therapy.

We assumed that the proportion of severe exacerbations in the subgroup from ETOPA would be the same as observed in a high-risk subgroup of the INNOVATE trial [based upon GINA (1) high-risk patient definition], which supports the risk

of asthma-related fatality used in the model. We had data to calculate the proportion of severe exacerbations for placebo (57.6%), so to estimate the proportion of severe exacerbations in the omalizumab responder group, we annualized the rate observed in the 28-week trial [0.2 (SD 0.6); annualized rate 0.103] and applied it to the number of responders (patients with ≥ 0.5 -point improvement in MiniAQLQ score). In 68 responders, there were 68 exacerbations, seven of which were considered severe, giving a proportion of 10.8% for severe exacerbations.

The model does not include any adverse event (AE) costs or utility decrements for either treatment group since AE rates were not significantly different in a statistical sense. Conservatively, AEs associated with long-term use of oral corticosteroids in standard therapy were not considered, as no comparable long-term data for omalizumab exist.

Inclusion of the possibility of asthma-related death is appropriate in a lifetime analysis of severe allergic asthma patients. The subgroup of the ETOPA population mainly included patients meeting the definitions (1, 2) of high risk of asthma-related mortality based on prior medical history. The trial environment is an exceptional

one, providing greater levels of patient care than is standard and increased patient medication compliance. Furthermore, sudden deterioration is likely to be rapidly treated, reducing the risk that an exacerbation will result in death. It was therefore considered to be more relevant to include 'real-world' mortality data in our model. Accordingly, we used the 3.11% risk of exacerbation-related fatality from severe exacerbations reported by Lowhagen et al. (3), but in order to reduce the likelihood of overestimating the benefit of omalizumab, conservatively assumed that there is no risk of fatal events associated with clinically significant exacerbations. It should be noted that definitions of 'clinically significant exacerbations' and 'severe exacerbations' are essentially clinical and thus are open to some interpretation, but data from the Scottish confidential enquiry (4) and the recent Watson study (5) support the estimates used. Fatality rates presented of 0.0–3.11%, provide decision-makers with a choice of options.

R. Brown¹, F. Turk², P. Dale¹, J. Bousquet³
¹United BioSource Corporation, London, UK; ²Novartis Pharma AG, Basel, Switzerland; ³Hôpital Arnaud de Villeneuve, Montpellier, France

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